N O T E. A.

The limit flow at the Upper Anicut, as connoted by readings of the Cauvery Dam North Gauge, will be as follows:-

		Cauvery Dam North Gauge.
June	...	*6.5 ft.*
July & August	...	*7 ft. and an additional supply of 410 M.C. ft. each 24 hours.*
September	...	*7 ft.*
October	...	*6.5 ft.*
November	...	*6.0 ft*
December	...	*3.5 ft*
January	...	*3.0 ft*

2. The discharges connoted by these limit gauges will in the first instance be based upon the joint gaugings at the Cauvery dam in 1917-18-19. These average discharges will be revived at the end of 1920 at again at the end of 1921 so as to bring in the results of these gaugings. The dischanges as revised at the end of 1921 will then remain in use till a further 5 years' gaugings (i.e. 1922 to 1926 inclusive) have been completed, when they will be finally revised on the basis of the ten years' gaugings.

3. The quantity of flow impoundable in the Krishnarajasagara will be calculated by the following formula:-

$$I = Kn/P-C$$

where I = *Quantity impoundable*

Kn = *Inflow at Krishnarajasagara, i.e. the measured flow at the three "standard gauging stations" at Chunchinkatte, Akkehebbal and Unduvadi, <u>plus</u> in addition an allowance for the yield from the intermediate catchment calculated from the rainfall in accordance*

with Strange's table of run-off from an "average" catchment.

C = Limit flow at Upper Anicut as given in paras 1 & 2 above.

P = Proportion factor i.e. the proportion which the flow at Krishnarajasagara bears to the corresponding natural flow at Upper Anicut.

4. During the "tentative period" (i.e. till the end of 1926) the values of P should be taken as).625 during the south-west monsoon and 0.30 during the north-east monsoon. From June 1927 onward, the values of P worked out as detailed below should be adopted permanently, subject to the minimum of).625 during the south-west monsoon (June to September) and).30 during the north-east monsoon (October to January).

(a) Periods on every day of which the limit flow is reached or exceeded either at the Upper Anicut or at Krishnarajasagara will alone be considered in working out the proportion factors. The ~~duxing of~~ duration of flow during any particular period will be taken to be the same both at Krishnarajasagara and at the Upper Anicut, after making due allowance for the time of transmission determined as mentioned below: (Note.- The limit flow at Krishnarajasagara for any month will be calculated by adopting the minimum values (.625 and .30) for the proportion factors.

(b) The time of transmission of flow from Krishnarajasagara to the Upper Anicut will depend upon the discharge and will be taken from a curve to be derived from observations of the times of occurrence of peak discharges at the two places. To enable accurate observations to be made, an automatic water level recorder will be installed at Krishnarajasagara before June 1921.

(c) The conbined flow at the three gauging stations in Mysore in any period unaer consideration, plus the allowance for the yield from the intermediate ctachment, will be taken to be the inflow at Krishnarajasagara during the period. The actual discharge realized at the Upper Anicut (to be read from the final curve of discharges referred to in para 2) during the corresponding period (allowing, of course, for time of transmission) subject to correction for the rise or fall of the reservoir level at Krishnarajasagara (Col.6 of the illustrative table B annexed) will be considered to be the natural flow at the Upper Anicut during the period.

(d) The proportion factor worked out as above for each such period during the 10 years (1917-1926) will be averaged separately for each calendar month as follows:-

$$P = \frac{P_1N_1+P_2N_2 \text{ etc., etc.,}}{N_1+N_2 \text{ etc.}}$$

where P_1 P_2 etc., are the proportion factors as obtained for different periods in any particular month during the 10 years, and N_1 N_2 etc., are the number of days in each of those periods.

N.B. - If any period overlaps into the preceding or following calendar month, the value of P for that particular period should be taken to apply to both the months; but the value of N will be the actual number of days of the period which fall in the particular month under consideration.

(e) The values of the proportion factors for different months as worked out above subject to the minimum values of .625 and .30 will be adopted for examining the effect of the impounding in Mysore on

the supplies obtained by Madras during the tentative period (1917-1926), see illustrative table B annexed. If a deficit of more than 5 per cent in at least 2 half-monthly periods of any particular calendar month is established on such examination, the proportion factor tentatively adopted for that month shall be increased so as to bring the deficit to below 5 %. The proportion factors thus worked out, but subject to the minimum values of .625 and .30 shall be adopted permanently from June 1927 onwards.

5. The figures in Col.9 of the illustrative table (quantity surplused) will be taken from working tables for the Krishnarajasagara prepared on the following lines:-

(a) The full effective capacity of the reservoir will be taken as 44,827 M.C.Ft. and a starting balance of 5,000 M.C.Ft. on the 1st June 1917 assumed.

(b) The natural flow at the Upper Anicut, the inflow at Krishnarajasagara and the quantity impoundable will be calculated as detailed above, the tentative values of P referred to in para 4 (e) being adopted for this purpose.

(c) The time of transmission will be read from the curve referred to in para 4(b).

(d) The draw-off for monsoon and perennial crop will be taken as follows:-

Month.	Monsoon crop.	Perennial crop.
June - 1st half.	..	54
" 2nd half.	103	54
July to November.	103	54
December.	69	54
January - 1st half.	51.5	54
" 2nd half to end of May.	..	54

(e) The issue for power will be taken as actually recorded, but subject to the minimum of 900 cusecs measured at Sivasamudram during the hot weather period (1st Feb. to 31st May).

(f) Allowance for evaporation will be made as follows.

June	...	5 inches
July to February	...	4
March	...	5
April	...	7
May	...	8

(g) To calculate the equivalent at the Upper Anicut of the flow intercepted in Mysore a suitable percentage allowance will be made for loss in transmission. This allowance will be settled by mutual agreement after further observations have been carried out during the next few years; or in the event of disagreement will be referred to the Government of India for final decision.

(h) The whole flow of the river at Kannambady may be impounded in the Reservoir from the 1st of February to the 31st of May, both days inclusive, but issues from the reservoir must be made when necessary to maintain such a flow as will pass to Madras not less than 900 cusecs below Sivasamudram Anicut.

6. Modified Rule XXIII in place of Award Rules XXIII and XXIV.

The areas to which Mysore are to extend their irrigation by improvement of duty on the old canals taking off from the rivers the Hemavati, the Lakshmanatirtha and the main river Cauvery above its junction with the Kabbini, will be limited to $33\frac{1}{3}$ per cent of the existing irrigated area. In lieu of 9,274 acres of old irrigation submerged under the reservoir 12,500 acres may be allowed on the new canals taking off direct from the rivers Hemavati, the Lakshmana Tirtha and the main river the Cauvery above its junction with

the Kabbini. Water required for any extensions on the said old canals over and above the 33 $\frac{1}{3}$ per cent limit or on the new canals on the Lakshmanatirtha, the Hemavathi and the Cauvery above its junction with the Kabbini above the said limit of 12,500 acres shall be considered as increased supply to be debited to the reservoir account and compensated for by increased issues to Madras.

Sd. W.J.Howley.
18. 9. 1920.